

WHAT IS CLAIMED IS:

1. A virtualized-information management apparatus for managing
corresponding information between real storage areas of a plurality of
storages connected to a network and a virtual storage area built by
5 virtually integrating the real storage areas, comprising:
a transmission/reception unit that transmits/receives, between
the virtualized-information management apparatus and another
virtualized-information management apparatus connected to another
network, information on updating the corresponding information; and
10 an updating unit that updates the corresponding information
based on the information received.
2. The virtualized-information management apparatus according to
claim 1, further comprising:
15 a searching unit that, when receiving a request for writing data
into or reading data from the virtual storage area, searches for a
virtualized-information management apparatus connected to a network
where the virtual storage area is built; and
a writing/reading unit that, when the virtualized-information
20 management apparatus searched is the virtualized-information
management apparatus itself, writes data into or reads data from the
real storage areas corresponding to the virtual storage area based on
the corresponding information updated.
- 25 3. The virtualized-information management apparatus according to

claim 2, wherein

the writing/reading unit includes

a capsulating unit that capsulates the information on
updating the corresponding information using an internet protocol

5 packet; and

a decapsulating unit that decapsulates capsulated
information,

when the network is connected to the another network via
internet protocol network, the writing/reading unit capsulates the
10 information about the updating of the corresponding information, and
transmits the information capsulated, and

when receiving the information capsulated, the writing/reading
unit decapsulates the information capsulated.

15 4. The virtualized-information management apparatus according to
claim 2, wherein when the writing/reading unit receives the request for
reading data from the another virtualized-information management
apparatus, it reads the data from the real storage areas corresponding
to the virtual storage area based on the corresponding information
20 updated, and transmits the data read to the another
virtualized-information management apparatus.

5. The virtualized-information management apparatus according to
claim 2, wherein when the virtualized-information management
25 apparatus searched is the another virtualized-information management

apparatus, the writing/reading unit transfers the request for writing data or reading data to the another virtualized-information management apparatus.

- 5 6. The virtualized-information management apparatus according to claim 5, further comprising:

 a data cache unit that, when receiving data transmitted from the another virtualized-information management apparatus in response to the request for reading data transferred, stores the data, and when
10 receiving another request for reading the data, outputs the data stored.

7. The virtualized-information management apparatus according to claim 2, further comprising:

 a copying unit that copies data stored in one real storage area
15 into other real storage area, wherein

 when receiving the request for writing or reading data stored in the one real storage area, the writing/reading unit switches a data writing destination or a data reading destination to the other real storage area based on an access load on the one real storage area.

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8. The virtualized-information management apparatus according to claim 1, further comprising:

 a building unit that selects the real storage areas based on a predetermined condition, and builds a new virtual storage area by
25 virtually integrating the real storage areas selected, wherein

the updating unit further updates the corresponding information based on corresponding information of the new virtual storage area.

9. The virtualized-information management apparatus according to
5 claim 8, wherein

the writing/reading unit includes

a capsulating unit that capsulates the information on updating the corresponding information using an internet protocol packet; and

10 a decapsulating unit that decapsulates capsulated information,

when the network is connected to the another network via internet protocol network, the writing/reading unit capsulates the information about the updating of the corresponding information, and
15 transmits the information capsulated, and

when receiving the information capsulated, the writing/reading unit decapsulates the information capsulated.

10. The virtualized-information management apparatus according to
20 claim 1, wherein

the transmission/reception unit includes

a capsulating unit that capsulates the information on updating the corresponding information using an internet protocol packet; and

25 a decapsulating unit that decapsulates capsulated

information,

when the network is connected to the another network via internet protocol network, the transmission/reception unit capsulates the information about the updating of the corresponding information, and transmits the information capsulated, and

when receiving the information capsulated, the transmission/reception unit decapsulates the information capsulated.

11. The virtualized-information management apparatus according to claim 10, wherein

the writing/reading unit includes

a capsulating unit that capsulates the information on updating the corresponding information using an internet protocol packet; and

a decapsulating unit that decapsulates capsulated information,

when the network is connected to the another network via internet protocol network, the writing/reading unit capsulates the information about the updating of the corresponding information, and transmits the information capsulated, and

when receiving the information capsulated, the writing/reading unit decapsulates the information capsulated.

12. A method of managing corresponding information between real storage areas of a plurality of storages connected to a network and a

virtual storage area built by virtually integrating the real storage areas in a virtualized-information management apparatus connected to the network, comprising:

transmitting information on updating the corresponding
5 information to another virtualized-information management apparatus connected to another network;

receiving the information on updating the corresponding information from the another virtualized-information management apparatus; and

10 updating the corresponding information based on the information received.

13. A computer program for managing corresponding information between real storage areas of a plurality of storages connected to a
15 network and a virtual storage area built by virtually integrating the real storage areas in a virtualized-information management apparatus connected to the network, making a computer execute:

transmitting information on updating the corresponding information to another virtualized-information management apparatus
20 connected to another network;

receiving the information on updating the corresponding information from the another virtualized-information management apparatus; and

updating the corresponding information based on the
25 information received.